

RCOR2 (R-25): sc-102078

BACKGROUND

In mammals, the CoREST (corepressor for element-1-silencing transcription factor) complex is a chromatin-modifying structure that, through interactions with NRSF (neuron restrictive silencer factor), regulates neuronal gene expression and neuronal cell fate. RCOR2 (REST corepressor 2) and RCOR3 (REST corepressor 3) are nuclear proteins that each contain one ELM2 domain and two SANT domains. RCOR2 and RCOR3, both members of the CoREST family, are thought to function as components of the CoREST complex; possibly playing a role in the transcriptional repression of neuronal genes. Additionally, RCOR2 and RCOR3, in conjunction with CoREST, can form immunocomplexes with a variety of histone-modifying genes, including G9a and HDAC1. Via these protein complexes, RCOR2 and RCOR3 can further regulate transcription by controlling the methylation and demethylation of target genes during early development. While RCOR2 is expressed as only one known isoform, RCOR3 exists as two isoforms due to alternative splicing events.

REFERENCES

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2. Dallman, J.E., et al. 2004. A conserved role but different partners for the transcriptional corepressor CoREST in fly and mammalian nervous system formation. *J. Neurosci.* 24: 7186-7193.
3. Ballas, N., et al. 2005. REST and its corepressors mediate plasticity of neuronal gene chromatin throughout neurogenesis. *Cell* 121: 645-657.
4. Lee, M.G., et al. 2005. An essential role for CoREST in nucleosomal Histone 3 Lysine 4 demethylation. *Nature* 437: 432-435.
5. Gu, H., et al. 2005. Components of the REST/CoREST/histone deacetylase repressor complex are disrupted, modified, and translocated in HSV-1-infected cells. *Proc. Natl. Acad. Sci. USA* 102: 7571-7576.
6. Lakowski, B., et al. 2006. CoREST-like complexes regulate chromatin modification and neuronal gene expression. *J. Mol. Neurosci.* 29: 227-239.
7. Yang, M., et al. 2006. Structural basis for CoREST-dependent demethylation of nucleosomes by the human LSD1 histone demethylase. *Mol. Cell* 23: 377-387.
8. Gu, H. and Roizman, B. 2007. Herpes simplex virus-infected cell protein 0 blocks the silencing of viral DNA by dissociating histone deacetylases from the CoREST-REST complex. *Proc. Natl. Acad. Sci. USA* 104: 17134-17139.
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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

CHROMOSOMAL LOCATION

Genetic locus: RCOR2 (human) mapping to 11q13.1.

SOURCE

RCOR2 (R-25) is a purified rabbit polyclonal antibody raised against RCOR2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

RCOR2 (R-25) is recommended for detection of RCOR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RCOR2 siRNA (h): sc-96631, RCOR2 shRNA Plasmid (h): sc-96631-SH and RCOR2 shRNA (h) Lentiviral Particles: sc-96631-V.

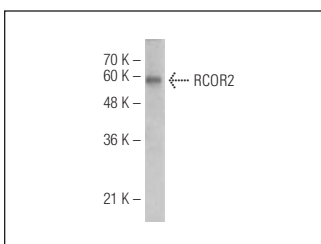
Molecular Weight of RCOR2: 58 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



RCOR2 (R-25): sc-102078. Western blot analysis of RCOR2 expression in Jurkat whole cell lysate.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.